## **Amendments to the Claims**:

This listing of claims will replace all prior versions, and listings of claims in the application:

## **Listing of Claims:**

1-88. (cancelled)

- 89. (currently amended) An item capture research system, said system comprising:
- (a) an item capture subsystem <u>comprising a document processor and an image</u>

  <u>camera for capturing images and information from each of plurality of items each</u>

  <u>of which relates to a transaction, wherein the plurality of items are comprised of</u>

  on-us items and cash letter items;
- (b) an image archive subsystem comprising an on-us items image database for storing images of the captured on-us items and a cash letter items image database for storing images of the captured cash letter items; and
- a transaction data archive subsystem for storing the information captured from the plurality of items, said transaction data archive subsystem having a multiple data structures, said multiple structures of said transaction data archive subsystem being comprised of: (i) an on-us items data structure, said on-us items data structure being further comprised of an on-us items archive file that is stored offline and an on-us items archive index, wherein the on-us items archive index is an index to the on-us items archive file and is stored online, (ii) an all items data structure, said all items data structure being further comprised of an all items archive file that is stored offline and an all items archive index, wherein the all

items archive index is an index to the all items archive file and is stored online, and (iii) a cash letter items data structure, said cash letter items data structure being further comprised of a cash letter items archive file that is stored offline and a cash letter items archive index, wherein the cash letter items archive index is an index to the cash letter items archive file and is stored online; and

(d) a research engine for receiving an item request, said item request comprising a request for information stored in the transaction data archive subsystem, and directing a response to the item request, said research engine comprising a request interpreter, a request director, and a request processor;

wherein on-us items are items that are drawn on a financial institution capturing the item, and cash letter items are items that are drawn on a financial institution other than a financial institution capturing the item.

- 90. (currently amended) The system of claim [1] <u>89</u>, wherein the on-us items data structure is further comprised of a plurality of credit transactions and a plurality of debit transactions.
- 91. (currently amended) The system of claim 90, <u>further comprising an associator</u>, wherein each of the plurality of credit transactions and debit transactions is associated with an account number <u>via the associator</u>.
- 92. (previously presented) The system of claim 91, wherein each of the plurality of credit transactions and debit transactions is comprised of MICR codeline data, a posted account

Appl. No. 09/835,791

Amdt. dated August 29, 2007

Supplemental Reply to Office Action of December 22, 2006

number, a bank ID number and a posting date.

93. (previously presented) The system of claim 92, wherein the MICR codeline data

for each of the plurality of credit transactions is comprised of an account number for an

associated payee account, an amount and a credit account code.

94. (currently amended) The system of claim 93, wherein each of the plurality of

credit transactions is associated with one or more corresponding debit transactions via the

associator, and wherein each of the one or more corresponding debit transactions is associated

with an account number associated with a payor account via the associator.

95. (previously presented) The system of claim 94, wherein the MICR codeline data

for each of the plurality of credit transactions is further comprised of one or more additional data

fields selected from the group consisting of a routing/transit number, a serial number and a

process control field.

96. (previously presented) The system of claim 94, wherein each of the plurality of

credit transactions is further comprised of at least one additional data field selected from the

group consisting of a sequence number, transaction code and import source.

97. (previously presented) The system of claim 92, wherein the MICR codeline data

for each of the plurality of debit transactions is comprised of a routing/transit number, an account

number for the associated payor account and an amount.

Appl. No. 09/835,791

Amdt. dated August 29, 2007

Supplemental Reply to Office Action of December 22, 2006

98. (currently amended) The system of claim 97, wherein each of the plurality of

debit transactions is associated with a corresponding credit transaction via the associator, and

wherein each of the corresponding credit transactions is associated with an account number

associated with a payee account via the associator.

99. (previously presented) The system of claim 98, wherein the MICR codeline data

for each of the plurality of debit transactions is further comprised of at least one additional data

field selected from the group consisting of a serial number and a process control field.

100. (previously presented) The system of claim 98, wherein each of the plurality of

debit transactions is further comprised of at least one additional data field selected from the

group consisting of a sequence number, transaction code and import source.

101. (currently amended) The system of claim [1] 89, wherein the all items data

structure is further comprised of a plurality of debit transactions.

102. (previously presented) The system of claim 101, wherein the MICR codeline data

for each of the plurality of debit transactions is comprised of a routing/transit number, an account

number for the associated payor account and an amount.

103. (currently amended) The system of claim 101 further comprising an associator,

wherein each of the plurality of debit transactions is associated with a corresponding credit

transaction <u>via the associator</u>, wherein each of the corresponding credit transactions is associated with an account number associated with a payee account <u>via the associator</u>.

- 104. (previously presented) The system of claim 103, wherein the MICR codeline data for each of the plurality of debit transactions is further comprised of at least one additional data field selected from the group consisting of a serial number and a process control field.
- 105. (previously presented) The system of claim 103, wherein each of the plurality of debit transactions is further comprised of at least one additional data field selected from the group consisting of a sequence number, transaction code and import source.
- 106. (currently amended) The system of claim [1] <u>89</u>, <u>further comprising an associator</u>, wherein the on-us items data structure is comprised of a plurality of transactions, wherein each of the plurality of transactions of the on-us items data structure is associated with a corresponding transaction stored in the all items data structure via the associator.
- 107. (currently amended) The system of claim [1] <u>89, further comprising an associator,</u> wherein the cash letter items data structure is comprised of a plurality of transactions, wherein each of the plurality of transactions of the cash letter items data structure is associated with a corresponding transaction stored in the all items data structure <u>via the associator</u>.
- 108. (currently amended) The system of claim [1] <u>89, further comprising an associator,</u> wherein each of the plurality of transactions of the cash letter items data structure is associated

Appl. No. 09/835,791

Amdt. dated August 29, 2007

Supplemental Reply to Office Action of December 22, 2006

with a corresponding transaction stored in the on-us items data structure via the associator.

109. (currently amended) The system of claim [1] 89, further comprising an image data

archive subsystem, wherein the image data archive subsystem is comprised of an on-us items

image database, wherein the on-us items image database is comprised of a plurality of images,

wherein the on-us items data structure is comprised of a plurality of transactions, wherein each of

the plurality of images of the on-us items image database is associated with a corresponding one

of the plurality of transactions of the on-us items data structure.

110. (currently amended) The system of claim [1] 89, further comprising an image data

archive subsystem, wherein the image data archive subsystem is comprised of an on-us items

image database, wherein the on-us items image database is comprised of a plurality of images,

wherein the all items data structure is comprised of a plurality of transactions, wherein each of

the plurality of images of the on-us items image database is associated with a corresponding one

of the plurality of transactions of the all items data structure.

111. (currently amended) The system of claim [1] 89, further comprising an image data

archive subsystem, wherein the image data archive subsystem is comprised of a transit items

image database, wherein the [transit] cash letter items image database is comprised of a plurality

of images, wherein the cash letter items data structure is comprised of a plurality of transactions,

wherein each of the plurality of images of the [transit] cash letter items image database is

associated with a corresponding one of the plurality of transactions of the cash letter items data

structure.

- archive subsystem, wherein the image data archive subsystem is comprised of a transit items image database, wherein the [transit] cash letter items image database is comprised of a plurality of images, wherein the all items data structure is comprised of a plurality of transactions, wherein each of the plurality of images of the [transit] cash letter items image database is associated with a corresponding one of the plurality of transactions of the all items data structure.
- 113. (new) The system of claim 89, wherein said on-us items image database is comprised of a bank ID number, an account number, and an image date.
- 114. (new) The system of claim 89, wherein said cash letter items image database is comprised of a sorter ID number, an image date, and a sequence number.
- 115. (new) The system of claim 89, wherein said image data archive subsystem is further comprised of a white paper image database for storing images of white paper.
- 116. (new) The system of claim 115, wherein said white paper image database is comprised of an account number and an image date.
- 117. (new) The system of claim 89, wherein said image data archive subsystem is further comprised of an image data index.
  - 118. (new) The system of claim 117, wherein said image data index is comprised of an

image date, a sorter ID number, a sorter cycle and a sequence number.

119. (new) The system of claim 118, wherein said image data index is further comprised of a database identifier.

120. (new) The system of claim 89, wherein the transaction is selected from the group consisting of an ATM transaction, a wire transaction, a phone access transaction, a debit card transaction and an online transaction.

121. (new) The system of claim 89, wherein said request interpreter is an all items request interpreter and is used to search the all items data structure.

122. (new) The system of claim 89, wherein said request interpreter is a cash letter request interpreter and is used to search the cash letter items data structure.

123. (new) The system of claim 89, wherein said request director directs a search request to the request processor.

124. (new) The system of claim 89, wherein said request processor is an all entries request processor.

125. (new) The system of claim 89, wherein said request processor is an all items request processor.

- 126. (new) The system of claim 89, wherein said request processor is a cash letter items request processor.
- 127. (new) The system of claim 89, wherein said on-us items data structure is comprised of an on-us items file.
  - 128. (new) The system of claim 127, wherein said on-us items file is a VSAM file.
  - 129. (new) The system of claim 127, wherein said on-us items file is online.
- 130. (new) The system of claim 89, wherein said on-us items archive file is comprised of MICR codeline data, a posted amount, a bank ID number, an account number and a posting date.
- 131. (new) The system of claim 130, wherein said MICR codeline data is comprised of a routing/transit number, an account number and a serial number.
- 132. (new) The system of claim 131, wherein said MICR codeline data is further comprised of a process control field.
- 133. (new) The system of claim 89, wherein said on-us items archive file is further comprised of at least one additional data field selected from the group consisting of a sequence

number, payee account number, transaction code and import source.

134. (new) The system of claim 89, wherein said on-us items archive file is a VSAM

file.

135. (new) The system of claim 89, wherein said on-us items archive file is stored on

magnetic tape.

136. (new) The system of claim 89, wherein said on-us items archive index is a VSAM

file.

137. (new) The system of claim 89, wherein said on-us items archive index is stored on

a DASD.

138. (new) The system of claim 89, wherein said all items data structure is comprised

of an all entries file.

139. (new) The system of claim 138, wherein said all entries file is comprised of a

capture site, a capture date, and an entry number.

140. (new) The system of claim 139, wherein said entry number is further comprised

of block information, the block information being comprised of a block sequence number and a

block amount.

- 141. (new) The system of claim 140, wherein said block information is further comprised of batch information, said batch information being comprised of a batch sequence number and a batch amount.
  - 142. (new) The system of claim 138, wherein said all entries file is a VSAM file.
  - 143. (new) The system of claim 138, wherein said all entries file is online.
  - 144. (new) The system of claim 138, wherein said all entries file is stored on a DASD.
- 145. (new) The system of claim 138, wherein said all items data structure is further comprised of an all items file.
- 146. (new) The system of claim 145, wherein said all items file is comprised of item information, said item information being comprised of MICR codeline data, an item amount, and an item sequence number.
  - 147. (new) The system of claim 145, wherein said all items file is a VSAM file.
  - 148. (new) The system of claim 145, wherein said all items file is online.
  - 149. (new) The system of claim 145, wherein said all items file is stored on a DASD.

- 150. (new) The system of claim 89, wherein said all items archive file is comprised of item information, said item information being comprised of MICR codeline data, an item amount, and an item sequence number.
  - 151. (new) The system of claim 89, wherein said all items archive file is a VSAM file.
- 152. (new) The system of claim 89, wherein said all items archive file is stored on magnetic tape.
- 153. (new) The system of claim 89, wherein said all items archive index is a VSAM file.
- 154. (new) The system of claim 89, wherein said all items archive index is stored on a DASD.
- 155. (new) The system of claim 89, wherein said cash letter items data structure is comprised of a cash letter items file.
- 156. (new) The system of claim 155, wherein said cash letter items file is comprised of an end point identifier, a cash letter date, a cash letter amount and a cash letter time.
  - 157. (new) The system of claim155, wherein said cash letter items file is a VSAM file.

- 158. (new) The system of claim 155, wherein said cash letter items file is stored on a DASD.
- 159. (new) The system of claim 89, wherein said cash letter items data structure is further comprised of a bundle items file.
- 160. (new) The system of claim 159, wherein said bundle items file is comprised of at least one bundle, wherein said at least one bundle is comprised of a bundle amount, a bundle time, and a bundle date.
- 161. (new) The system of claim 160, wherein said at least one bundle is further comprised of at least one item, said at least one item being comprised of MICR codeline data and an item amount.
  - 162. (new) The system of claim 159, wherein said bundle items file is a VSAM file.
  - 163. (new) The system of claim 159, wherein said bundle items file is online.
- 164. (new) The system of claim 159, wherein said bundle items file is stored on a DASD.
  - 165. (new) The system of claim 89, wherein said cash letter items data structure further

includes a bundle items archive file.

- 166. (new) The system of claim 165, wherein said bundle items archive file is comprised of at least one bundle, wherein said at least one bundle is comprised of a bundle amount, a bundle time, and a bundle date.
- 167. (new) The system of claim 166, wherein said at least one bundle is further comprised of at least one item, said at least one item being comprised of MICR codeline data and an item amount.
- 168. (new) The system of claim 165, wherein said bundle items archive file is a VSAM file.
  - 169. (new) The system of claim 165, wherein said bundle items archive file is offline.
- 170. (new) The system of claim 165, wherein said bundle items archive file is stored on magnetic tape.
- 171. (new) The system of claim 165, wherein said cash letter items data structure is further comprised of a bundles items archive index, wherein the bundle items archive index is an index to the bundle items archive file.
  - 172. (new) The system of claim 171, wherein said bundle items archive index is a

Appl. No. 09/835,791 Amdt. dated August 29, 2007 Supplemental Reply to Office Action of December 22, 2006

VSAM file.

173. (new) The system of claim 171, wherein said bundle items archive index is online.

174. (new) The system of claim 171, wherein said bundle items archive index is stored on a DASD.

- 175. (new) An item capture research method, said method comprising:
- (a) capturing images and information from a plurality of items each of which relates to a transaction, wherein the plurality of items are comprised of on-us items and cash letter items;
- (b) storing images of the captured on-us items in an on-us items image database and storing images of the captured cash letter items in a cash letter items image database; and
- structures, said storing step being comprised of: (i) storing on-us items in an on-us items data structure, said on-us items data structure being further comprised of an on-us items archive file and an on-us items archive index, wherein the on-us items archive index is an index to the on-us items archive file, storing the on-us items archive file offline and storing the on-us items archive index online, (ii) storing all items in an all items data structure, said all items data structure being further comprised of an all items archive file and an all items archive index, wherein the

all items archive index is an index to the all items archive file, storing the all items archive file offline and storing the all items archive index online, and (iii) storing cash letter items in a cash letter items data structure, said cash letter items data structure being further comprised of a cash letter items archive file and a cash letter items archive index, wherein the cash letter items archive index is an index to the cash letter items archive file, storing the cash letter items archive file offline and storing the cash letter items archive index online; and

(d) receiving an item request, said item request comprising a request for information stored in step (c), and directing a response to the item request;

wherein on-us items are items that are drawn on a financial institution capturing the item, and cash letter items are items that are drawn on a financial institution other than a financial institution capturing the item.

- 176. (new) The method of claim 175, further comprising storing a plurality of credit transactions and a plurality of debit transactions in the on-us items data structure.
- 177. (new) The method of claim 176, further comprising associating each of the plurality of credit transactions and debit transactions with an account number.
- 178. (new) The method of claim178, further comprising instructions for storing MICR codeline data, a posted account number, a bank ID number and a posting date for each of the plurality of credit transactions and debit transactions.

179. (new) The method of claim178, further comprising storing MICR codeline data comprising an account number for an associated payee account, an amount and a credit account code for each of the plurality of credit transactions.

180. (new) The method of claim 179, further comprising associating each of the plurality of credit transactions with one or more corresponding debit transactions, and associating each of the one or more corresponding debit transactions with an account number associated with a payor account.

181. (new) The method of claim180, further comprising storing MICR codeline data comprising one or more additional data fields selected from the group consisting of a routing/transit number, a serial number and a process control field for each of the plurality of credit transactions.

- 182. (new) The method of claim 180, further comprising storing at least one additional data field selected from the group consisting of a sequence number, transaction code and import source for each of the plurality of credit transactions.
- 183. (new) The method of claim 178, further comprising storing MICR codeline data comprising a routing/transit number, an account number for the associated payor account and an amount for each of the plurality of debit transactions.
  - 184. (new) The method of claim 183, further comprising associating each of the

plurality of debit transactions with a corresponding credit transaction, and associating each of the corresponding credit transactions with an account number associated with a payee account.

- 185. (new) The method of claim184, further comprising storing MICR codeline date comprising at least one additional data field selected from the group consisting of a serial number and a process control field for each of the plurality of debit transactions.
- 186. (new) The method of claim 184, further comprising storing at least one additional data field selected from the group consisting of a sequence number, transaction code and import source for each of the plurality of debit transactions.
- 187. (new) The method of claim 175, further comprising storing a plurality of debit transactions in the all items data structure.
- 188. (new) The method of claim 187, further comprising storing MICR codeline data comprising of a routing/transit number, an account number for the associated payor account and an amount for each of the plurality of debit transactions.
- 189. (new) The method of claim 187, further comprising associating each of the plurality of debit transactions with a corresponding credit transaction, and associating each of the corresponding credit transactions with an account number associated with a payee account.
  - 190. (new) The method of claim 189, further comprising storing MICR codeline data

comprising at least one additional data field selected from the group consisting of a serial number and a process control field with each of the plurality of debit transactions.

- 191. (new) The method of claim 189, further comprising storing at least one additional data field selected from the group consisting of a sequence number, transaction code and import source for each of the plurality of debit transactions.
- 192. (new) The method of claim 175, further comprising associating each of a plurality of transactions stored in the on-us items data structure with a corresponding transaction stored in the all items data structure.
- 193. (new) The method of claim 175, further comprising associating each of a plurality of transactions of the cash letter items data structure with a corresponding transaction stored in the all items data structure.
- 194. (new) The method of claim 175, further comprising associating each of a plurality of transactions of the cash letter items data structure with a corresponding transaction stored in the on-us items data structure.
- 195. (new) The method of claim 175, further comprising associating each of the plurality of images of the on-us items image database with a corresponding one of the plurality of transactions of the on-us items data structure.

196. (new) The method of claim 175, further comprising associating each of the plurality of images of the on-us items image database is with a corresponding one of the plurality of transactions of the all items data structure.

197. (new) The method of claim 175, further comprising associating each of the plurality of images of the cash letter items image database with a corresponding one of the plurality of transactions of the cash letter items data structure.

198. (new) The method of claim 175, further comprising associating each of the plurality of images of the cash letter items image database with a corresponding one of the plurality of transactions of the all items data structure.

- 199. (new) The method of claim 175, further comprising storing a bank ID number, an account number, and an image date in said on-us items image database
- 200. (new) The method of claim 175, further comprising storing a sorter ID number, an image date, and a sequence number in said cash letter items image database.
- 201. (new) The method of claim 175, further comprising storing images of white paper in a white paper image database.
- 202. (new) The method of claim 201, further comprising storing an account number and an image date in said white paper image database.

- 203. (new) The method of claim 175, further comprising providing an image data index.
- 204. (new) The method of claim 203, further comprising storing an image date, a sorter ID number, a sorter cycle and a sequence number in said image data index.
- 205. (new) The method of claim 204, further comprising storing a database identifier in said image data index.
- 206. (new) The method of claim 175, further comprising storing a transaction selected from the group consisting of an ATM transaction, a wire transaction, a phone access transaction, a debit card transaction and an online transaction.
- 207. (new) The method of claim 175, further comprising searching the all items data structure via said request interpreter comprising an all items request interpreter.
- 208. (new) The method of claim 175, further comprising searching the cash letter items data structure via said request interpreter comprising a cash letter request interpreter.
- 209. (new) The method of claim 175, further comprising directing a search request to the request processor via said request director.
  - 210. (new) The method of claim 175, further comprising processing a search request

for all entries via said request processor comprising an all entries request processor.

- 211. (new) The method of claim 175, further comprising processing a search request for all items via said request processor comprising an all items request processor.
- 212. (new) The method of claim 175, further comprising processing a search request for cash letter items via said request processor comprising a cash letter items request processor.
- 213. (new) The method of claim 175, further comprising storing on-us items in an onus items file.
- 214. (new) The method of claim 213, further comprising storing said on-us items file in a VSAM file.
- 215. (new) The method of claim 213, further comprising storing said on-us items file online.
- 216. (new) The method of claim 175, further comprising storing MICR codeline data, a posted amount, a bank ID number, an account number and a posting date in said on-us items archive file.
- 217. (new) The method of claim 216, further comprising storing said MICR codeline data comprising of a routing/transit number, an account number and a serial number in said on-us

items archive file.

218. (new) The method of claim 217, further comprising storing said MICR codeline data comprising a process control field in said on-us items archive file.

219. (new) The method of claim 175, further comprising storing at least one additional data field selected from the group consisting of a sequence number, payee account number, transaction code and import source in said on-us items archive file.

220. (new) The method of claim 175, further comprising storing said on-us items archive file in a VSAM file.

- 221. (new) The method of claim 175, further comprising storing said on-us items archive file on magnetic tape.
- 222. (new) The method of claim 175, further comprising storing said on-us items archive index in a VSAM file.
- 223. (new) The method of claim 175, further comprising storing said on-us items archive index on a DASD.
- 224. (new) The method of claim 175, further comprising storing an all entries file in said all items data structure.

- 225. (new) The method of claim 224, further comprising storing a capture site, a capture date, and an entry number in said all entries file.
- 226. (new) The method of claim 225, further comprising storing block information, the block information being comprised of a block sequence number and a block amount, for an entry.
- 227. (new) The method of claim 226, further comprising storing batch information, said batch information being comprised of a batch sequence number and a batch amount, for a block.
- 228. (new) The method of claim 224, further comprising storing said all entries file in a VSAM file.
- 229. (new) The method of claim 224, further comprising storing said all entries file online.
- 230. (new) The method of claim 224, further comprising storing said all entries file on a DASD.
- 231. (new) The method of claim 224, further comprising storing an all items file in said all items data structure.

Supplemental Reply to Office Action of December 22, 2006

232. (new) The method of claim 231, further comprising storing item information, said

item information being comprised of MICR codeline data, an item amount, and an item sequence

number, in said all items file.

233. (new) The method of claim 231, further comprising storing said all items file in a

VSAM file.

234. (new) The method of claim 231, further comprising storing said all items file

online.

235. (new) The method of claim 231, further comprising storing said all items file on a

DASD.

236. (new) The method of claim 175, further comprising storing item information, said

item information being comprised of MICR codeline data, an item amount, and an item sequence

number, in said all items archive file.

237. (new) The method of claim 175, further comprising storing said all items archive

file in a VSAM file.

238. (new) The method of claim 175, further comprising storing said all items archive

file on magnetic tape.

- 239. (new) The method of claim 175, further comprising storing said all items archive index in a VSAM file.
- 240. (new) The method of claim 175, further comprising storing said all items archive index on a DASD.
- 241. (new) The method of claim 175, further comprising storing a cash letter items file in said cash letter items data structure.
- 242. (new) The method of claim 241, further comprising storing an end point identifier, a cash letter date, a cash letter amount and a cash letter time in said cash letter items file.
- 243. (new) The method of claim 241, further comprising storing said cash letter items file in a VSAM file.
- 244. (new) The method of claim 241, further comprising storing said cash letter items file on a DASD.
- 245. (new) The method of claim 175, further comprising storing a bundle items file in said cash letter items data structure.

246. (new) The method of claim 245, further comprising storing at least one bundle, wherein said at least one bundle is comprised of a bundle amount, a bundle time, and a bundle date, in said bundle items file.

247. (new) The method of claim 246, further comprising storing at least one item, said at least one item being comprised of MICR codeline data and an item amount, in said at least one bundle.

248. (new) The method of claim 245, further comprising storing said bundle items file in a VSAM file.

- 249. (new) The method of claim 245, further comprising storing said bundle items file online.
- 250. (new) The method of claim 245, further comprising storing said bundle items file on a DASD.
- 251. (new) The method of claim 175, further comprising storing a bundle items archive file in said cash letter items data structure.
- 252. (new) The method of claim 251, further comprising storing at least one bundle, wherein said at least one bundle is comprised of a bundle amount, a bundle time, and a bundle date, in said bundle items archive file.

- 253. (new) The method of claim 252, further comprising storing at least one item, said at least one item being comprised of MICR codeline data and an item amount, in said at least one bundle.
- 254. (new) The method of claim 251, further comprising storing said bundle items archive file in a VSAM file.
- 255. (new) The method of claim 251, further comprising storing said bundle items archive file offline.
- 256. (new) The method of claim 251, further comprising storing bundle items archive file on magnetic tape.
- 257. (new) The method of claim 251, further comprising storing a bundles items archive index, wherein the bundle items archive index is an index to the bundle items archive file, in said cash letter items data structure.
- 258. (new) The method of claim 257, further comprising storing said bundle items archive index in a VSAM file.
- 259. (new) The method of claim 257, further comprising storing said bundle items archive index online.

Appl. No. 09/835,791 Amdt. dated August 29, 2007 Supplemental Reply to Office Action of December 22, 2006

- 260. (new) The method of claim 257, further comprising storing said bundle items archive index is on a DASD.
- 261. A computer program product encoded in one or more computer storage media for executing by a computer, the computer program product comprising instructions for:
  - (a) capturing images and information from a plurality of items each of which relates to a transaction, wherein the plurality of items are comprised of on-us items and cash letter items;
  - (b) storing images of the captured on-us items in an on-us items image database and storing images of the captured cash letter items in a cash letter items image database; and
  - storing the information captured from the plurality of items in multiple data structures, said storing step being comprised of: (i) storing on-us items in an on-us items data structure, said on-us items data structure being further comprised of an on-us items archive file and an on-us items archive index, wherein the on-us items archive index is an index to the on-us items archive file, storing the on-us items archive file offline and storing the on-us items archive index online, (ii) storing all items in an all items data structure, said all items data structure being further comprised of an all items archive file and an all items archive index, wherein the all items archive index is an index to the all items archive file, storing the all items archive file offline and storing the all items archive index online, and (iii) storing cash letter items in a cash letter items data structure, said cash letter items

data structure being further comprised of a cash letter items archive file and a cash letter items archive index, wherein the cash letter items archive index is an index to the cash letter items archive file, storing the cash letter items archive file offline and storing the cash letter items archive index online; and

(d) receiving an item request, said item request comprising a request for information stored in step (c), and directing a response to the item request;

wherein on-us items are items that are drawn on a financial institution capturing the item, and cash letter items are items that are drawn on a financial institution other than a financial institution capturing the item.

- 262. (new) The computer program product of claim 261, further comprising instructions for storing a plurality of credit transactions and a plurality of debit transactions in the on-us items data structure.
- 263. (new) The computer program product of claim 262, further comprising instructions for associating each of the plurality of credit transactions and debit transactions with an account number.
- 264. (new) The computer program of claim 263, further comprising instructions for storing MICR codeline data, a posted account number, a bank ID number and a posting date for each of the plurality of credit transactions and debit transactions.
- 265. (new) The computer program of claim 264, further comprising instructions for storing MICR codeline data comprising an account number for an associated payee account, an

Appl. No. 09/835,791

Amdt. dated August 29, 2007

Supplemental Reply to Office Action of December 22, 2006

amount and a credit account code for each of the plurality of credit transactions.

266. (new) The computer program of claim 265, further comprising instructions for associating each of the plurality of credit transactions with one or more corresponding debit transactions, and associating each of the one or more corresponding debit transactions with an

account number associated with a payor account.

267. (new) The computer program of claim 266, further comprising instructions for

storing MICR codeline data comprising one or more additional data fields selected from the

group consisting of a routing/transit number, a serial number and a process control field for each

of the plurality of credit transactions.

268. (new) The computer program of claim 266, further comprising instructions for

storing at least one additional data field selected from the group consisting of a sequence

number, transaction code and import source for each of the plurality of credit transactions.

269. (new) The computer program of claim 264, further comprising instructions for

storing MICR codeline data comprising a routing/transit number, an account number for the

associated payor account and an amount for each of the plurality of debit transactions.

270. (new) The computer program of claim 269, further comprising instructions for

associating each of the plurality of debit transactions with a corresponding credit transaction, and

associating each of the corresponding credit transactions with an account number associated with

Appl. No. 09/835,791

Amdt. dated August 29, 2007

Supplemental Reply to Office Action of December 22, 2006

a payee account.

271. (new) The computer program of claim 270, further comprising instructions for

storing MICR codeline date comprising at least one additional data field selected from the group

consisting of a serial number and a process control field for each of the plurality of debit

transactions.

272. (new) The computer program of claim 270, further comprising instructions for

storing at least one additional data field selected from the group consisting of a sequence

number, transaction code and import source for each of the plurality of debit transactions.

273. (new) The computer program of claim 261, further comprising instructions for

storing a plurality of debit transactions in the all items data structure.

274. (new) The computer program of claim 273, further comprising instructions for

storing MICR codeline data comprising of a routing/transit number, an account number for the

associated payor account and an amount for each of the plurality of debit transactions.

275. (new) The computer program of claim 273, further comprising instructions for

associating each of the plurality of debit transactions with a corresponding credit transaction, and

associating each of the corresponding credit transactions with an account number associated with

a payee account.

- 276. (new) The computer program of claim 275, further comprising instructions for storing MICR codeline data comprising at least one additional data field selected from the group consisting of a serial number and a process control field with each of the plurality of debit transactions.
- 277. (new) The computer program of claim 275, further comprising instructions for storing at least one additional data field selected from the group consisting of a sequence number, transaction code and import source for each of the plurality of debit transactions.
- 278. (new) The computer program of claim 261, further comprising instructions for associating each of a plurality of transactions stored in the on-us items data structure with a corresponding transaction stored in the all items data structure.
- 279. (new) The computer program of claim 261, further comprising instructions for associating each of a plurality of transactions of the cash letter items data structure with a corresponding transaction stored in the all items data structure.
- 280. (new) The computer program of claim 261, further comprising instructions for associating each of a plurality of transactions of the cash letter items data structure with a corresponding transaction stored in the on-us items data structure.
- 281. (new) The computer program of claim 261, further comprising instructions for associating each of the plurality of images of the on-us items image database with a

corresponding one of the plurality of transactions of the on-us items data structure.

- 282. (new) The computer program of claim 261, further comprising instructions for associating each of the plurality of images of the on-us items image database is with a corresponding one of the plurality of transactions of the all items data structure.
- 283. (new) The computer program of claim 261, further comprising instructions for associating each of the plurality of images of the cash letter items image database with a corresponding one of the plurality of transactions of the cash letter items data structure.
- 284. (new) The computer program of claim 261, further comprising instructions for associating each of the plurality of images of the cash letter items image database with a corresponding one of the plurality of transactions of the all items data structure.
- 285. (new) The computer program of claim 261, further comprising instructions for storing a bank ID number, an account number, and an image date in said on-us items image database
- 286. (new) The computer program of claim 261, further comprising instructions for storing a sorter ID number, an image date, and a sequence number in said cash letter items image database.
- 287. (new) The computer program of claim 261, further comprising instructions for storing images of white paper in a white paper image database.

288. (new) The computer program of claim 287, further comprising instructions for storing an account number and an image date in said white paper image database.

289. (new) The computer program of claim 261, further comprising instructions for providing an image data index.

290. (new) The computer program of claim 289, further comprising instructions for storing an image date, a sorter ID number, a sorter cycle and a sequence number in said image data index.

- 291. (new) The computer program of claim 290, further comprising instructions for storing a database identifier in said image data index.
- 292. (new) The computer program of claim 261, further comprising instructions for storing a transaction selected from the group consisting of an ATM transaction, a wire transaction, a phone access transaction, a debit card transaction and an online transaction.
- 293. (new) The computer program of claim 261, further comprising instructions for searching the all items data structure via said request interpreter comprising an all items request interpreter.
  - 294. (new) The computer program of claim 261, further comprising instructions for

searching the cash letter items data structure via said request interpreter comprising a cash letter

request interpreter.

295. (new) The computer program of claim 261, further comprising instructions for

directing a search request to the request processor via said request director.

296. (new) The computer program of claim 261, further comprising instructions for

processing a search request for all entries via said request processor comprising an all entries

request processor.

297. (new) The computer program of claim 261, further comprising instructions for

processing a search request for all items via said request processor comprising an all items

request processor.

298. (new) The computer program of claim 261, further comprising instructions for

processing a search request for cash letter items via said request processor comprising a cash

letter items request processor.

299. (new) The computer program of claim 261, further comprising instructions for

storing on-us items in an on-us items file.

300. (new) The computer program of claim 299, further comprising instructions for

storing said on-us items file in a VSAM file.

Appl. No. 09/835,791 Amdt. dated August 29, 2007 Supplemental Reply to Office Action of December 22, 2006

- 301. (new) The computer program of claim 299, further comprising instructions for storing said on-us items file online.
- 302. (new) The computer program of claim 261, further comprising instructions for storing MICR codeline data, a posted amount, a bank ID number, an account number and a posting date in said on-us items archive file.
- 303. (new) The computer program of claim 302, further comprising instructions for storing said MICR codeline data comprising of a routing/transit number, an account number and a serial number in said on-us items archive file.
- 304. (new) The computer program of claim 303, further comprising instructions for storing said MICR codeline data comprising a process control field in said on-us items archive file.
- 305. (new) The computer program of claim 261, further comprising instructions for storing at least one additional data field selected from the group consisting of a sequence number, payee account number, transaction code and import source in said on-us items archive file.
- 306. (new) The computer program of claim 261, further comprising instructions for storing said on-us items archive file in a VSAM file.

307. (new) The computer program of claim 261, further comprising instructions for storing said on-us items archive file on magnetic tape.

308. (new) The computer program of claim 261, further comprising instructions for storing said on-us items archive index in a VSAM file.

309. (new) The computer program of claim 261, further comprising instructions for storing said on-us items archive index on a DASD.

- 310. (new) The computer program of claim 261, further comprising instructions for storing an all entries file in said all items data structure.
- 311. (new) The computer program of claim 310, further comprising instructions for storing a capture site, a capture date, and an entry number in said all entries file.
- 312. (new) The computer program of claim 311, further comprising instructions for storing block information, the block information being comprised of a block sequence number and a block amount, for an entry.
- 313. (new) The computer program of claim 312, further comprising instructions for storing batch information, said batch information being comprised of a batch sequence number and a batch amount, for a block.

314. (new) The computer program of claim 310, further comprising instructions for storing said all entries file in a VSAM file.

315. (new) The computer program of claim 310, further comprising instructions for

storing said all entries file online.

316. The computer program of claim 310, further comprising instructions for storing

said all entries file on a DASD.

317. (new) The computer program of claim 310, further comprising instructions for

storing an all items file in said all items data structure.

318. (new) The computer program of claim 317, further comprising instructions for

storing item information, said item information being comprised of MICR codeline data, an item

amount, and an item sequence number, in said all items file.

319. (new) The computer program of claim 317, further comprising instructions for

storing said all items file in a VSAM file.

320. (new) The computer program of claim 317, further comprising instructions for

storing said all items file online.

321. (new) The computer program of claim 317, further comprising instructions for storing said all items file on a DASD.

322. (new) The computer program of claim 261, further comprising instructions for storing item information, said item information being comprised of MICR codeline data, an item amount, and an item sequence number, in said all items archive file.

323. (new) The computer program of claim 261, further comprising instructions for storing said all items archive file in a VSAM file.

324. (new) The computer program of claim 261, further comprising instructions for storing said all items archive file on magnetic tape.

325. (new) The computer program of claim 261, further comprising instructions for storing said all items archive index in a VSAM file.

- 326. (new) The computer program of claim 261, further comprising instructions for storing said all items archive index on a DASD.
- 327. (new) The computer program of claim 261, further comprising instructions for storing a cash letter items file in said cash letter items data structure.
  - 328. (new) The computer program of claim 327, further comprising instructions for

storing an end point identifier, a cash letter date, a cash letter amount and a cash letter time in said cash letter items file.

- 329. (new) The computer program of claim 327, further comprising instructions for storing said cash letter items file in a VSAM file.
- 330. (new) The computer program of claim 327, further comprising instructions for storing said cash letter items file on a DASD.
- 331. (new) The computer program of claim 261, further comprising instructions for storing a bundle items file in said cash letter items data structure.
- 332. (new) The computer program of claim 331, further comprising instructions for storing at least one bundle, wherein said at least one bundle is comprised of a bundle amount, a bundle time, and a bundle date, in said bundle items file.
- 333. (new) The computer program of claim 332, further comprising instructions for storing at least one item, said at least one item being comprised of MICR codeline data and an item amount, in said at least one bundle.
- 334. (new) The computer program of claim 331, further comprising instructions for storing said bundle items file in a VSAM file.

335. (new) The computer program of claim 331, further comprising instructions for storing said bundle items file online.

336. (new) The computer program of claim 331, further comprising instructions for storing said bundle items file on a DASD.

337. (new) The computer program of claim 261, further comprising instructions for storing a bundle items archive file in said cash letter items data structure.

338. (new) The computer program of claim 337, further comprising instructions for storing at least one bundle, wherein said at least one bundle is comprised of a bundle amount, a bundle time, and a bundle date, in said bundle items archive file.

339. (new) The computer program of claim 338, further comprising instructions for storing at least one item, said at least one item being comprised of MICR codeline data and an item amount, in said at least one bundle.

- 340. (new) The computer program of claim 337, further comprising instructions for storing said bundle items archive file in a VSAM file.
- 341. (new) The computer program of claim 337, further comprising instructions for storing said bundle items archive file offline.

Appl. No. 09/835,791

Amdt. dated August 29, 2007

Supplemental Reply to Office Action of December 22, 2006

342. The computer program of claim 337, further comprising instructions for storing bundle items archive file on magnetic tape.

343. (new) The computer program of claim 337, further comprising instructions for storing a bundles items archive index, wherein the bundle items archive index is an index to the bundle items archive file, in said cash letter items data structure.

344. (new) The computer program of claim 343, further comprising instructions for storing said bundle items archive index in a VSAM file.

345. (new) The computer program of claim 343, further comprising instructions for storing said bundle items archive index online.

346. (new) The computer program of claim 343, further comprising instructions for storing said bundle items archive index is on a DASD.